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DOGM
MINERALS PROGRAM
FILE COPY

August 7, 1990

Mr. Bryan Johnson
Hecla Mining Company
6500 Mineral Drive
Box C-8000
Coeur D'Alene, Idaho 83814-1931

Dear Mr. Johnson:

Re: Decommissioning and Reclamation of Escalante Unit Tailing-Impoundment, Hecla Mining Company, M/021/004, Iron County, Utah

A meeting was held on August 1, 1990, between the Division of Oil, Gas and Mining and administrative staff of the Bureau of Water Pollution Control (BWPC). Discussions involved tailings decommissioning requirements and Hecla's latest July 14, 1990 tailing pond reclamation proposal.

The Bureau has expressed their concern about potential ground-water contamination which could result from residual cyanide and heavy metals concentrations remaining in the tailing impoundment upon reclamation. The Division, and BWPC have conceptually agreed that Hecla should suspend initiation of impoundment reclamation until the following information is provided and evaluated by both regulatory agencies:

- * A detoxification/neutralization plan for the residual cyanide contained within the tailings. The detoxification/neutralization proposal should be geared toward achievement of an ultimate discharge concentration level of 0.2 mg/l total cyanide. The plan should contain, but not be limited to, information detailing the type of neutralization proposed, monitoring and sampling provisions, an estimated timeframe to complete the

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neutralization treatment, and a cost estimate to implement said plan. The plan must provide reasonable assurance that all of the tailings would be sufficiently detoxified with the neutralizing solution. A suggestion was made that a laboratory test be performed using a column or vat type of leach/rinse. The results could then be projected to full-scale field implementation.

According to the BWPC, neutralization of the tailings material to reduce residual cyanide to acceptable levels would eliminate the likelihood that a Ground water Discharge Permit would be required for this facility. If it is determined that the residual cyanide in the tailings cannot be effectively neutralized, then the following alternative would likely be required:

- * Encapsulate the tailing material and reclaim the impoundment without detoxification/neutralization of the residual cyanide. The Bureau has indicated that under this scenario a Ground water Discharge Permit would probably need to be developed for the site. The Bureau may require Hecla to establish additional monitoring wells within and adjacent to the tailing impoundment. The wells and underdrain discharge would need to be monitored until the cyanide and metals concentrations were reduced to acceptable levels. If monitoring indicated that problems developed, Hecla would be required to mitigate those problems.

In addition to the above, DOGM will ask that Hecla further characterize the types of materials found in the pond at varying depths. The type of evaluation would include cyanide levels, pH, acid-base potential, and metals. We will also ask that effluents originating from the underdrain be sampled for the same constituents.

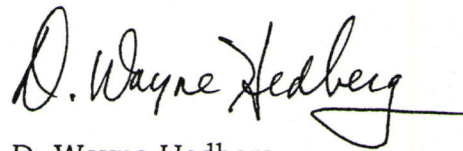
Please come prepared to discuss the content of this letter on August 13, 1990, 9:30 a.m. (the meeting date we have already established) with members of the DOGM Minerals staff, and the Bureau of Water Pollution Control. We have extended an invitation to Mr. Doug Bauer of the Bureau of Land Management to sit in on this meeting as well.

We apologize for not getting back to you sooner on these latest developments, and the fact that this will delay your proposed reclamation schedule by several

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months. However, we are very concerned that we substantially reduce the future possibility of ground water contamination from the tailing impoundment.

Sincerely,

A handwritten signature in dark ink, reading "D. Wayne Hedberg". The signature is fluid and cursive, with a long horizontal stroke extending from the end of the name.

D. Wayne Hedberg
Permitting Supervisor,
Minerals Program

jb
cc: Fred Pehrson, BWPC
Doug Bauer, BLM
Lowell Braxton
Minerals Staff
MNM021004.1